



**Brunsing Associates, Inc.**

February 7, 2006

Project No. 383

**Mr. Dale Radford**  
Sonoma County Department of Health Services  
475 Aviation Blvd, Suite 220  
Santa Rosa, California 95403

**Groundwater Monitoring Report**  
**January 2006**  
**100 Brown Street**  
**Sebastopol, California**

Dear Mr. Radford:

This report presents the results of groundwater monitoring performed at 100 Brown Street, Sebastopol, California (Plate 1) by Brunsing Associates, Inc. (BAI). The groundwater monitoring field activities were performed on January 6, 2006. This report was prepared to fulfill the monitoring requirements of the Sonoma County Department of Health Services-Environmental Health Division (SCDHS-EHD).

#### **SITE HISTORY**

In December 1990, a 1,000-gallon underground storage tank (UST) used for gasoline was partially excavated from the former tire service facility. The tank was observed to extend underneath the onsite building and was therefore left in place and backfilled. Soil and groundwater samples were collected to evaluate if contamination resulting from the UST existed, by drilling soil boring B-1 and installing monitoring well MW-1 in February 1992 and August 1994, respectively.

In May 1995, four 1,000-gallon USTs were discovered at the site. Three of the tanks were subsequently rinsed, purged, and removed. The fourth tank was also observed to extend beneath the onsite building. After rinsing and purging, the two tanks that partially extend under the building were filled with cement slurry and left in place.

In November 1996, BAI supervised the drilling of four Hydropunch borings (HP-1 through HP-4) to depths of 25 feet below ground surface (bgs), to further evaluate the extent of soil and groundwater contamination. The results of the site investigation were presented in BAI's report, "Soil and Groundwater Investigation, Wyatt Tire Service", dated December 23, 1996. The SCDHS-EHD stated that the results of the site investigation indicated that active remediation would be necessary, in correspondence dated January 7, 1997. In August 1998, BAI supervised the installation of two additional monitoring wells, MW-2 and MW-3, and the installation of five shallow borings, B-2 through B-6, of which borings B-3 through B-6 were converted to wells. The results of the additional site investigation were presented in BAI's report, "Soil & Groundwater Investigation and Soil Vapor Extraction Pilot Test Report", dated January 14, 1998.

A subsequent Feasibility Study for the site dated January 19, 1998 recommended soil vapor extraction (SVE) as the most cost-effective remedial action for the site. A Corrective Action Plan was submitted to the regulatory agencies on May 29, 1998 by BAI, which provided the treatment system design, in addition to a complete site history, and discussion of site geology and analytical data.

On September 7, 1999, SVE wells B-7 and B-8, and air sparging well SP-1 were installed. Installation of the remediation system described in the CAP was initiated in September 1999. Installation of the wells and the remediation system were described in BAI's report "Remediation Progress Report through April 7, 2001", dated May 8, 2001.

The first remedial treatment method used at the site was SVE via a thermal oxidizing system. The system was initially started up on April 14, 2000 but was effectively inactive due to mechanical difficulties until February 2001. The remedial system was then functional through May 29, 2001. The system was subsequently shut down because the volatile organic compounds (VOCs) concentrations were not high enough in the influent air stream to sustain operation of the thermal oxidizer, as detailed in BAI's letter to the Bay Area Air Quality Management District (BAAQMD), dated October 24, 2001.

BAI recommended replacement of the thermal oxidation unit with a carbon treatment system in an October 24, 2001 letter; the replacement system was approved by the SCDHS-EHD in their letter dated November 8, 2001. The



Mr. Dale Radford

February 7, 2006

Page 3

remedial replacement system consisted of a smaller regenerative blower and a carbon treatment system. The remediation system was re-started on August 8, 2002 and initially included two 400-pound carbon canisters. As discussed in BAI's letter to the BAAQMD on September 12, 2002, the carbon capacity was increased to contain a 2,000 pound-carbon vessel and a 400-pound carbon vessel. BAI's report titled "Remediation Progress Report, August 2004 through December 2004", dated February 7, 2005 provides the most recent information of the remedial operations at the site.

In accordance with BAI's report, "Workplan Addendum to Deepen Well MW-1," dated September 18, 2002 and approved by the SCDHS-EHD in their letter dated September 27, 2002, BAI drilled and installed one 38-foot deep well, MW-4, on February 19, 2003. Soil samples collected from the borehole in well MW-4 contained petroleum hydrocarbons predominately at 10 feet below ground surface (bgs). The results of the well installation and January 2003 groundwater monitoring are presented in BAI's report "Well Installation and Groundwater Monitoring Report", dated April 18, 2003.

BAI's "Confirmation Soil Sampling Workplan" dated July 8, 2004 proposed that due to the low influent vapor and the dropping levels of groundwater at the site that soil confirmation drilling be performed to evaluate the effectiveness of the remediation system. The July 8, 2004 workplan also recommended sampling sparge well SP-1 instead of installation of an additional monitoring well at the site.

Drilling of five exploratory borings (CB-1 through CB-5) occurred on September 24, 2004, as proposed in BAI's July 8, 2004 workplan. The highest residual soil concentrations reported during this investigation were found in the soil samples collected from the intermediate clay layer, a five-foot thick layer of clayey material starting at approximately 7 to 10 feet bgs. The results of the site investigation were presented in BAI's report, "Confirmation Soil Sampling Report", dated November 22, 2004.

As approved by the SCDHS-EHD, the remediation equipment is being dismantled and a site conceptual model is being prepared to evaluate the current site conditions. Plate 2 shows the locations of the tanks, soil borings and monitoring wells. Table 1 and Table 2 present the groundwater elevation data



and groundwater analytical results, respectively. Table 3 presents the well construction details.

## **QUARTERLY GROUNDWATER MONITORING**

Depths to groundwater were measured on January 6, 2006 in wells MW-1, MW-2, MW-3, MW-4, and B-4 through B-8. Well B-3 was not measured because the well was not accessible. Groundwater samples were collected from wells MW-4, B-5, B-6, B-7, and B-8 on January 6, 2006. Wells MW-1, MW-2, MW-3, B-3, and B-4 were not sampled because there was insufficient water present or because the wells were inaccessible during field activities. The groundwater sampling protocol and field reports are included in Appendix A. The groundwater samples were analyzed by BACE Analytical and Field Services for TPH as gasoline, BTEX, petroleum oxygenates and lead scavengers by EPA Test Method 8260. The groundwater analytical report for the samples is presented in Appendix B.

## **RESULTS**

Cumulative depths to groundwater and calculated groundwater elevations are presented in Table 1. The "deep" zone groundwater flow direction was not calculated because wells MW-1, MW-2, and MW-3 were dry or inaccessible. The calculated gradient and flow direction for the perched water-bearing zone, using data from wells B-5, B-6, and B-8, was 0.027 foot per foot and to the northeast.

TPH as gasoline was reported in the groundwater samples collected from wells B-5, B-6, B-7, B-8, and MW-4 at concentrations of 2.9, 60, 0.13, 11, and 2.1 milligrams per liter (mg/l), respectively. Benzene concentrations ranging from 55.4 to 176 micrograms per liter ( $\mu\text{g/l}$ ) were also reported in the B-5, B-6, and B-8 samples. MTBE at concentrations of 802 and 24.1  $\mu\text{g/l}$  were reported in the B-5 and B-8 samples, respectively. BTEX concentrations were reported in the samples collected from wells B-5, B-6, and B-8. Toluene, ethylbenzene, and xylenes were also reported in the MW-4 sample, and toluene and xylenes were reported in the B-7 sample. Cumulative groundwater analytical results are presented in Table 2.



## CONCLUSIONS AND RECOMMENDATIONS

With the exception of MTBE, the highest petroleum hydrocarbon concentrations were reported in the sample collected from well B-6 (Table 2). The groundwater sample from well B-5 continues to contain unusually high MTBE concentrations compared to the analytical data for the other wells. Comparison of the January 2006 MW-4, B-6, and B-7 concentrations to the October 2005 concentrations indicates that the petroleum hydrocarbon concentrations generally decreased or were relatively stable in these samples. The BTEX concentrations reported in the January 2006 B-5 sample increased relative to the September 2005 data, whereas the TPH as gasoline and MTBE concentrations were stable or decreased. The petroleum hydrocarbons reported in the B-8 sample increased compared to the July 2005 data. However, the January 2006 B-8 concentrations are less than those reported for well B-8 in January and May 2005 (Table 2).

The next groundwater monitoring event will be performed in April 2006. A report presenting the results of the April 2006 groundwater sampling will be prepared after the analytical data are received and reviewed.



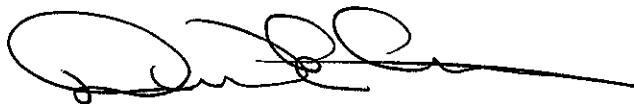
Mr. Dale Radford  
February 7, 2006  
Page 6

If you have any questions regarding this report, please contact Diana Dickerson at (707) 838-3027.

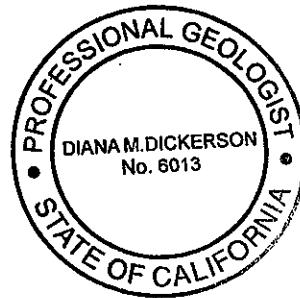
Sincerely,



Diana M. Dickerson, P.G., R.E.A.  
Principal Geologist



David E. Conley, P.G.  
Senior Geologist



Attachments:

- Table 1. Groundwater Elevation Data
- Table 2. Groundwater Analytical Results
- Table 3. Well Construction Details
- Plate 1. Site Vicinity Map
- Plate 2. Site Map
- Plate 3. Groundwater Elevation Map, January 6, 2006
- Appendix A. Monitoring Well Sampling Protocol and Field Reports
- Appendix B. Analytical Laboratory Report

cc: Ms. Shirley Sarten  
Mr. Michael Gest



## **TABLES**



**Table 1. Groundwater Elevation Data**

100 Brown Street

Sebastopol, California

<b>Well ID</b>	<b>Date</b>	<b>Top of Casing Elevation (ft., MSL)</b>	<b>Depth to Water (feet)</b>	<b>Groundwater Elevation (ft., MSL)</b>	<b>Groundwater Flow Direction and Gradient</b>
MW-1	29-Aug-97	76.90	22.98	53.92	South Gradient = 0.002 ft./ft.
MW-2	29-Aug-97	76.05	22.13	53.92	
MW-3	29-Aug-97	76.61	22.63	53.98	
MW-1	3-Nov-97	76.90	24.95	51.95	Southeast Gradient = 0.007 ft./ft.
MW-2	3-Nov-97	76.05	24.38	51.67	
MW-3	3-Nov-97	76.61	24.59	52.02	
MW-1	15-Jan-98	76.90	22.77	54.13	South Gradient = 0.002 ft./ft.
MW-2	15-Jan-98	76.05	21.91	54.14	
MW-3	15-Jan-98	76.61	22.44	54.17	
MW-1	18-Mar-98	76.90	18.99	57.91	South Gradient = 0.002 ft./ft.
MW-2	18-Mar-98	76.05	18.13	57.92	
MW-3	18-Mar-98	76.61	18.65	57.96	
MW-1	13-Apr-98	76.90	18.30	58.60	South Gradient = 0.003 ft./ft.
MW-2	13-Apr-98	76.05	17.43	58.62	
MW-3	13-Apr-98	76.61	17.95	58.66	
MW-1	4-May-98	76.90	17.95	58.95	South Gradient = 0.002 ft./ft.
MW-2	4-May-98	76.05	17.09	58.96	
MW-3	4-May-98	76.61	17.60	59.01	
MW-1	16-Jun-98	76.90	17.45	59.45	South Gradient = 0.002 ft./ft.
MW-2	16-Jun-98	76.05	16.61	59.44	
MW-3	16-Jun-98	76.61	17.11	59.50	
MW-1	24-Jul-98	76.90	18.29	58.61	South Southeast Gradient = 0.001 ft./ft.
MW-2	24-Jul-98	76.05	17.46	58.59	
MW-3	24-Jul-98	76.61	17.97	58.64	
MW-1	5-Aug-98	76.90	18.55	58.35	South Gradient = 0.001 ft./ft.
MW-2	5-Aug-98	76.05	17.71	58.34	
MW-3	5-Aug-98	76.61	18.23	58.38	
MW-1	9-Sep-98	76.90	19.45	57.45	South Gradient = 0.002 ft./ft.
MW-2	9-Sep-98	76.05	18.62	57.43	
MW-3	9-Sep-98	76.61	19.11	57.50	
MW-1	8-Oct-98	76.90	20.02	56.88	South Gradient = 0.002 ft./ft.
MW-2	8-Oct-98	76.05	19.17	56.88	
MW-3	8-Oct-98	76.61	19.68	56.93	



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MW-1	3-Nov-98	76.90	20.18	56.72	South Gradient = 0.001 ft./ft.
MW-2	3-Nov-98	76.05	19.33	56.72	
MW-3	3-Nov-98	76.61	19.86	56.75	
MW-1	16-Apr-99	76.90	15.73	61.17	South Gradient = 0.002 ft./ft.
MW-2	16-Apr-99	76.05	14.87	61.18	
MW-3	16-Apr-99	76.61	15.40	61.21	
MW-1	13-Jul-99	76.90	19.13	57.77	South Southeast Gradient = 0.002 ft./ft.
MW-2	13-Jul-99	76.05	18.31	57.74	
MW-3	13-Jul-99	76.61	18.80	57.81	
MW-1	29-Oct-99	77.27	21.31	55.96	North Northwest Gradient = 0.015 ft./ft.
MW-2	29-Oct-99	76.05	20.47	55.58	
MW-3	29-Oct-99	75.94	20.33	55.61	
MW-1	5-Jan-00	77.27	20.98	56.29	North Gradient = 0.022 ft./ft.
MW-2	5-Jan-00	76.05	20.02	56.03	
MW-3	5-Jan-00	75.94	20.17	55.77	
MW-1	22-May-00	77.27	19.96	57.31	South Gradient = 0.002 ft./ft.
MW-2	22-May-00	76.05	18.73	57.32	
MW-3	22-May-00	75.94	18.58	57.36	
MW-1	7-Aug-00	77.27	22.06	55.21	North northwest Gradient = 0.006 ft./ft.
MW-2	7-Aug-00	76.05	20.68	55.37	
MW-3	7-Aug-00	75.94	20.84	55.10	
MW-1	8-Nov-00	77.27	24.00	53.27	South Gradient = 0.005 ft./ft.
MW-2	8-Nov-00	76.05	22.77	53.28	
MW-3	8-Nov-00	75.94	22.61	53.33	
MW-1	19-Feb-01	77.27	23.10	54.17	South Gradient = 0.006 ft./ft.
MW-2	19-Feb-01	76.05	21.89	54.16	
MW-3	19-Feb-01	75.94	21.62	54.32	
MW-1	8-May-01	77.27	22.28	54.99	South Southeast Gradient = 0.004 ft./ft.
MW-2	8-May-01	76.05	21.11	54.94	
MW-3	8-May-01	75.94	20.86	55.08	



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MW-1	27-Aug-01	77.27	dry	dry	--
MW-2	27-Aug-01	76.05	23.77	52.28	
MW-3	27-Aug-01	75.94	23.58	52.36	
MW-1	6-Dec-01	77.27	dry	dry	--
MW-2	6-Dec-01	76.05	25.23	50.82	
MW-3	6-Dec-01	75.94	25.09	50.85	
MW-1	15-Mar-02	77.27	dry	dry	--
MW-2	15-Mar-02	76.05	23.89	52.16	
MW-3	15-Mar-02	75.94	23.76	52.18	
MW-1	26-Apr-02	77.27	dry	dry	
MW-1	25-Jun-02	77.27	dry	dry	--
MW-2	25-Jun-02	76.05	25.10	50.95	
MW-3	25-Jun-02	75.94	24.96	50.98	
MW-1	12-Sep-02	77.27	dry	dry	--
MW-2	12-Sep-02	76.05	26.26	49.79	
MW-3	12-Sep-02	75.94	26.11	49.83	
MW-1	3-Oct-02	77.27	dry	dry	--
MW-2	3-Oct-02	76.05	26.60	49.45	
MW-3	3-Oct-02	75.94	26.43	49.51	
MW-1	28-Jan-03	77.27	dry	dry	--
MW-2	28-Jan-03	76.05	26.13	49.92	
MW-3	28-Jan-03	75.94	26.01	49.93	
MW-4	25-Feb-03	76.67	26.52	50.15	
MW-1	17-Apr-03	77.27	dry	dry	South Southeast Gradient = 0.006 ft./ft.
MW-2	17-Apr-03	76.05	25.66	50.39	
MW-3	17-Apr-03	75.94	25.38	50.56	
MW-4	17-Apr-03	76.67	26.31	50.36	
MW-1	28-Apr-03	77.27	dry	dry	South Southeast Gradient = 0.001 ft./ft.
MW-2	28-Apr-03	76.05	25.47	50.58	
MW-3	28-Apr-03	75.94	25.34	50.60	
MW-4	28-Apr-03	76.67	26.09	50.58	



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<b>Well ID</b>	<b>Date</b>	<b>Top of Casing Elevation (ft., MSL)</b>	<b>Depth to Water (feet)</b>	<b>Groundwater Elevation (ft., MSL)</b>	<b>Groundwater Flow Direction and Gradient</b>
MW-1	7-Jul-03	77.27	dry	dry	South Southeast Gradient = 0.002 ft./ft.
MW-2	7-Jul-03	76.05	26.00	50.05	
MW-3	7-Jul-03	75.94	25.82	50.12	
MW-4	7-Jul-03	76.67	26.62	50.05	
MW-1	17-Oct-03	77.27	dry	dry	South Southeast Gradient = 0.003 ft./ft.
MW-2	17-Oct-03	76.05	28.23	47.82	
MW-3	17-Oct-03	75.94	27.94	48.00	
MW-4	17-Oct-03	76.67	28.84	47.83	
MW-1	16-Jan-04	77.27	dry	dry	--
MW-2	16-Jan-04	76.05	dry	dry	
MW-3	16-Jan-04	75.94	dry	dry	
MW-4	16-Jan-04	76.67	29.11	47.56	
MW-1	4-Apr-04	77.27	dry	dry	--
MW-2	4-Apr-04	76.05	dry	dry	
MW-3	4-Apr-04	75.94	dry	dry	
MW-4	4-Apr-04	76.67	28.16	48.51	
MW-1	12-Jul-04	77.27	NA	NA	--
MW-2	12-Jul-04	76.05	dry	dry	
MW-3	12-Jul-04	75.94	28.15	47.79	
MW-4	12-Jul-04	76.67	29.93	46.74	
SP-1	12-Jul-04	NS	30.09	NA	
MW-1	18-Oct-04	77.27	NA	NA	--
MW-2	18-Oct-04	76.05	dry	dry	
MW-3	18-Oct-04	75.94	dry	dry	
MW-4	18-Oct-04	76.67	31.50	45.17	
SP-1	18-Oct-04	NS	31.75	NA	



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Well ID	Date	Top of Casing Elevation (ft., MSL)	Depth to Water (feet)	Groundwater Elevation (ft., MSL)	Groundwater Flow Direction and Gradient
MW-1	3-Jan-05	79.78	dry	dry	--
MW-2	3-Jan-05	78.57	dry	dry	
MW-3	3-Jan-05	78.45	dry	dry	
MW-4	3-Jan-05	79.18	31.87	47.31	
SP-1	3-Jan-05	79.66	32.11	47.55	
B-3	3-Jan-05	79.33	5.33	74.00	
B-4	3-Jan-05	79.08	dry	dry	
B-5	3-Jan-05	78.19	4.69	73.50	
B-6	3-Jan-05	78.96	4.91	74.05	
B-7	3-Jan-05	78.40	5.30	73.10	
B-8	3-Jan-05	78.85	3.89	74.96	
MW-1	10-May-05	79.78	dry	dry	Not Calculated for Wells MW-1, MW-2, MW-3 and MW-4
MW-2	10-May-05	78.57	dry	dry	
MW-3	10-May-05	78.45	dry	dry	
MW-4	10-May-05	79.18	30.31	48.87	
SP-1	10-May-05	79.66	NA	NA	
B-3	10-May-05	79.33	NA	NA	
B-4	10-May-05	79.08	dry	dry	
B-5	10-May-05	78.19	4.12	74.07	
B-6	10-May-05	78.96	4.62	74.34	
B-7	10-May-05	78.40	2.03	76.37	
B-8	10-May-05	78.85	2.44	76.41	



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MW-1	26-Jul-05	79.78	dry	dry	Not Calculated for Wells MW-1, MW-2, MW-3 and MW-4
MW-2	26-Jul-05	78.57	dry	dry	
MW-3	26-Jul-05	78.45	dry	dry	
MW-4	26-Jul-05	79.18	31.00	48.18	
SP-1	26-Jul-05	79.66	NA	NA	
B-3	26-Jul-05	79.33	NA	NA	
B-4	26-Jul-05	79.08	dry	dry	
B-5	26-Jul-05	78.19	4.71	73.48	
B-6	26-Jul-05	78.96	5.66	73.30	
B-7	26-Jul-05	78.40	4.12	74.28	
B-8	26-Jul-05	78.85	4.21	74.64	
MW-1	12-Oct-05	79.78	dry	dry	Not Calculated for Wells MW-1, MW-2, MW-3 and MW-4
MW-2	12-Oct-05	78.57	dry	dry	
MW-3	12-Oct-05	78.45	NA	NA	
MW-4	12-Oct-05	79.18	32.45	46.73	
SP-1	12-Oct-05	79.66	NA	NA	
B-3	12-Oct-05	79.33	NA	NA	
B-4	12-Oct-05	79.08	8.33	70.75	
B-5	12-Oct-05	78.19	6.80	71.39	
B-6	12-Oct-05	78.96	6.98	71.98	
B-7	12-Oct-05	78.40	5.50	72.90	
B-8	12-Oct-05	78.85	6.32	72.53	



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 100 Brown Street  
 Sebastopol, California

Well ID	Date	Top of Casing Elevation (ft., MSL)	Depth to Water (feet)	Groundwater Elevation (ft., MSL)	Groundwater Flow Direction and Gradient
MW-1	6-Jan-06	79.78	dry	dry	Not Calculated for Wells MW-1, MW-2, MW-3 and MW-4
MW-2	6-Jan-06	78.57	dry	dry	
MW-3	6-Jan-06	78.45	dry	dry	
MW-4	6-Jan-06	79.18	32.74	46.44	
SP-1	6-Jan-06	79.66	33.02	46.64	Using data for Wells B-5, B-6 and B-8, Northeast Gradient=0.027 ft./ft.
B-3	6-Jan-06	79.33	NA	NA	
B-4	6-Jan-06	79.08	dry	dry	
B-5	6-Jan-06	78.19	2.23	75.96	
B-6	6-Jan-06	78.96	2.76	76.20	
B-7	6-Jan-06	78.40	1.44	76.96	
B-8	6-Jan-06	78.85	2.05	76.80	

Wells resurveyed by Phelps and Associates on November 8, 2000 after well heads modified for treatment system. Well MW-4 surveyed on April 9, 2003 by Ray Carlson and Associates. All wells resurveyed by Ray Carlson and Associates on March 8, 2005.

MSL = Mean sea level

NS = not surveyed

-- = Not calculated because no water present in at least one well

NA = inaccessible or not applicable



**Table 2. Groundwater Analytical Results**

100 Brown Street  
Sebastopol, California

Well Number	Sampling Date	TPH as Gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Depth to Water (Feet TOC)
MW-1	2-Sep-94	4.8	440	1,100	200	1,100	NR	23.99
MW-1	1-Feb-95	3.8	150	120	37	840	NR	21.91
MW-1	3-May-95	26	2,000	3,800	660	6,500	NR	19.53
MW-1	29-Aug-97	ND	ND	1.2	ND	ND	16	22.98
MW-1	18-Mar-98	13	440	83	12	3,700	240	18.99
MW-1	16-Jun-98	8.4	510	340	110	1,800	300	17.45
MW-1	9-Sep-98	1.9	150	78	70	350	230	19.45
MW-1	16-Apr-99	20	750	170	310	5,500	370	15.73
MW-1	13-Jul-99	7.7	220	260	280	1,600	160	19.13
MW-1	29-Oct-99	NS	NS	NS	NS	NS	NS	21.31
MW-1	5-Jan-00	0.42	46	2.9	32	1.5	50	20.98
MW-1	22-May-00	0.27	0.6	1.7	ND	ND	260	19.96
MW-1	7-Aug-00	1.1	42	6.5	28	3.6	192 <sup>B</sup>	22.06
MW-1	8-Nov-00	ND	ND	ND	ND	ND	<2.0 <sup>A</sup>	24.00
MW-1	19-Feb-01	ND	ND	ND	ND	ND	23 <sup>C</sup>	23.10
MW-1	8-May-01	ND	ND	1.1	ND	2.2	ND <sup>A</sup>	22.28
MW-2	29-Aug-97	ND	ND	ND	ND	ND	30	22.13
MW-2	18-Mar-98	ND	ND	ND	ND	4.0	600	18.13
MW-2	16-Jun-98	ND	ND	ND	ND	ND	470	16.61
MW-2	9-Sep-98	1.3	ND	2.0	ND	2.2	1,200	18.62
MW-2	16-Apr-99	2.1	ND	3.3	ND	ND	2,000	14.87
MW-2	13-Jul-99	0.41	ND	12	ND	0.68	300	18.31
MW-2	29-Oct-99	1.7	13	29	18	50	19.1 <sup>A</sup>	20.47
MW-2	5-Jan-00	ND	ND	ND	ND	ND	60	20.02
MW-2	22-May-00	ND	ND	ND	ND	ND	180	18.73
MW-2	7-Aug-00	0.13	ND	14	ND	ND	30.2 <sup>A</sup>	20.68
MW-2	8-Nov-00	ND	ND	ND	ND	ND	5.5 <sup>A</sup>	22.77
MW-2	19-Feb-01	ND	ND	ND	ND	ND	1.1 <sup>A</sup>	21.89
MW-2	8-May-01	ND	ND	ND	ND	ND	ND <sup>A</sup>	21.11
MW-2	27-Aug-01	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 5.00 <sup>A</sup>	23.77
MW-2	6-Dec-01	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	25.23
MW-2	15-Mar-02	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	23.89
MW-2	25-Jun-02	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	1.53 <sup>A</sup>	25.10
MW-2	3-Oct-02	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	26.60
MW-2	28-Jan-03	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	26.13
MW-2	28-Apr-03	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	25.47
MW-2	7-Jul-03	< 0.050	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0 <sup>A</sup>	26.00



**Table 2. Groundwater Analytical Results**

100 Brown Street  
Sebastopol, California

Well Number	Sampling Date	TPH as Gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Depth to Water (Feet TOC)
MW-3	29-Aug-97	3.6	46	180	3.3	360	47	22.63
MW-3	18-Mar-98	22	500	690	39	4,200	1,400	18.65
MW-3	16-Jun-98	19	690	2,700	54	3,500	1,500	17.11
MW-3	9-Sep-98	7.4	42	11	0.7	280	620	19.11
MW-3	16-Apr-99	6.7	51	17	40	500	530	15.40
MW-3	13-Jul-99	8.2	330	23	140	270	1,700	18.80
MW-3	29-Oct-99	ND	ND	ND	ND	ND	70.2 <sup>A</sup>	20.33
MW-3	5-Jan-00	1.1	2.8	30	5.8	27	31	20.17
MW-3	22-May-00	3.5	83	26	57	132	460	18.58
MW-3	7-Aug-00	ND	ND	5.6	ND	ND	10.4 <sup>A</sup>	20.84
MW-3	8-Nov-00	ND	ND	ND	ND	ND	2.5 <sup>A</sup>	22.61
MW-3	19-Feb-01	ND	ND	2.1	ND	3.1	<1.0 <sup>A</sup>	21.62
MW-3	8-May-01	ND	ND	7.4	ND	ND	ND <sup>D</sup>	20.86
MW-3	27-Aug-01	2.7	<1.25	<1.25	2.20	4.82	<12.5 <sup>A</sup>	23.58
MW-3	6-Dec-01	5.4	<2.5	<2.5	<2.5	<2.5	<5.0 <sup>A</sup>	25.09
MW-3	15-Mar-02	4.4	<2.5	<2.5	<2.5	<2.5	7.00 <sup>A</sup>	23.76
MW-3	25-Jun-02	<0.050	<0.50	<0.50	<0.50	<0.50	1.72 <sup>A</sup>	24.96
MW-3	3-Oct-02	11	<10	<10	<10	<10	<20 <sup>A</sup>	26.43
MW-3	28-Jan-03	4.0	<10	<10	<10	11.6	<20 <sup>A</sup>	26.01
MW-3	28-Apr-03	4.5	<10	<10	<10	<10	<20 <sup>A</sup>	25.34
MW-3	7-Jul-03	6.4	<10	<10	<10	<10	<20 <sup>A</sup>	25.82
MW-4	25-Feb-03	<0.05	<0.50	<0.50	<0.50	4.75	<1.0 <sup>A</sup>	26.52
MW-4	28-Apr-03	<0.05	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	26.09
MW-4	7-Jul-03	<0.05	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	26.62
MW-4	17-Oct-03	<0.050	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	28.84
MW-4	16-Jan-04	<0.050	<0.30	<0.30	<0.50	<0.50	<0.50 <sup>A</sup>	29.11
MW-4	4-Apr-04	<0.050	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	28.16
MW-4	12-Jul-04	<0.050	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	29.93
MW-4	18-Oct-04	<0.050	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	31.50
MW-4	3-Jan-05	0.34	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	31.87
MW-4	10-May-05	0.85	<0.50	<0.50	1.10	6.07	<1.0 <sup>A</sup>	30.31
MW-4	26-Jul-05	0.31	<0.50	<0.50	0.53	2.07	<1.0 <sup>A</sup>	31.00
MW-4	12-Oct-05	4.7	<2.5	5.25	642	127	<5.0 <sup>A</sup>	32.45
MW-4	6-Jan-06	2.1	<5.0	5.54	448	6.23	<10 <sup>A</sup>	32.74



**Table 2. Groundwater Analytical Results**

100 Brown Street  
 Sebastopol, California

Well Number	Sampling Date	TPH as Gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Depth to Water (Feet TOC)
SP-1	27-May-04	<b>0.38</b>	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	29.50
SP-1	12-Jul-04	<b>0.68</b>	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	30.09
SP-1	18-Oct-04	<b>0.48</b>	<0.50	<0.50	<0.50	<0.50	<1.0 <sup>A</sup>	31.75
SP-1	4-Jan-05	<b>1.7</b>	<0.50	<b>6.09</b>	<b>122</b>	<b>67.9</b>	<1.0 <sup>A</sup>	32.11
B-3	4-Jan-05	<b>0.10</b>	<0.50	<0.50	<0.50	<0.50	<b>69.7<sup>A</sup></b>	5.33
B-3	26-Jul-05	<b>0.31</b>	<b>9.94</b>	<1.0	<1.0	<1.0	<b>161<sup>E</sup></b>	4.63
B-5	3-Jan-05	<b>20</b>	<b>344</b>	<b>635</b>	<b>200</b>	<b>1,130</b>	<b>5,870<sup>A</sup></b>	4.69
B-5	10-May-05	<b>32</b>	<b>1,070</b>	<b>550</b>	<b>703</b>	<b>3,340</b>	<b>12,600<sup>D</sup></b>	4.12
B-5	26-Jul-05	<b>49</b>	<b>1,380</b>	<b>2,050</b>	<b>829</b>	<b>4,700</b>	<b>12,900<sup>F</sup></b>	4.71
B-5	15-Sep-05	<b>2.9</b>	<b>9.43</b>	<b>5.54</b>	<b>5.69</b>	<b>61.8</b>	<b>1,130</b>	<sup>G</sup>
B-5	6-Jan-06	<b>2.9</b>	<b>55.4</b>	<b>26.9</b>	<b>10.3</b>	<b>210</b>	<b>802<sup>A</sup></b>	2.23
B-6	3-Jan-05	<b>78</b>	<b>807</b>	<b>15,700</b>	<b>7,000</b>	<b>38,500</b>	<250 <sup>A</sup>	4.91
B-6	10-May-05	<b>120</b>	<b>312</b>	<b>4,775</b>	<b>6,400</b>	<b>34,400</b>	<250 <sup>A</sup>	4.62
B-6	26-Jul-05	<b>110</b>	<b>339</b>	<b>3,430</b>	<b>5,640</b>	<b>33,000</b>	<b>271<sup>A</sup></b>	5.66
B-6	15-Sep-05	<b>68</b>	<b>129</b>	<b>1,860</b>	<b>1,920</b>	<b>13,000</b>	<b>204</b>	<sup>G</sup>
B-6	12-Oct-05	<b>73</b>	<b>418</b>	<b>3,870</b>	<b>5,920</b>	<b>36,300</b>	<b>255<sup>A</sup></b>	6.98
B-6	6-Jan-06	<b>60</b>	<b>176</b>	<b>2,740</b>	<b>4,980</b>	<b>29,800</b>	<100 <sup>A</sup>	2.76
B-7	4-Jan-05	<b>1.0</b>	<b>1.37</b>	<b>22.3</b>	<b>14.1</b>	<b>81.5</b>	<b>27<sup>A</sup></b>	5.30
B-7	10-May-05	<b>0.23</b>	<0.50	<0.50	<b>0.67</b>	<b>3.34</b>	<b>70.2<sup>A</sup></b>	2.03
B-7	26-Jul-05	<b>0.30</b>	<b>1.46</b>	<1.0	<1.0	<b>3.00</b>	<b>148<sup>A</sup></b>	4.12
B-7	12-Oct-05	<b>1.7</b>	<b>1.41</b>	<1.0	<b>4.91</b>	<b>10.8</b>	<b>93.4<sup>A</sup></b>	5.50
B-7	6-Jan-06	<b>0.13</b>	<1.0	<b>1.32</b>	<1.0	<b>1.44</b>	<2.0 <sup>A</sup>	1.44



**Table 2. Groundwater Analytical Results**

100 Brown Street  
Sebastopol, California

Well Number	Sampling Date	TPH as Gasoline (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Depth to Water (Feet TOC)
B-8	4-Jan-05	38	419	8,930	944	13,400	<250 <sup>A</sup>	3.89
B-8	10-May-05	13	176	2,160	782	4,030	<250 <sup>A</sup>	2.44
B-8	26-Jul-05	<1.0	14.5	64.0	69.4	297	<20 <sup>A</sup>	4.21
B-8	6-Jan-06	11	84.4	856	430	1,970	24.1 <sup>A</sup>	2.05

ND= Not detected at the laboratory reporting limit.

NR= Analysis not requested.

NS= Not sampled.

mg/l = milligrams per liter

µg/l = micrograms per liter

TOC = Below top of Casing (Monitoring Well).

< 1.25 = analyte is less than the method reporting limit specified.

<sup>A</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B.

Only those compounds detected are listed.

<sup>B</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B. Tert-butyl alcohol reported at 227 µg/l and 1,2-dichloroethane reported at 13.4 µg/l.

<sup>C</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B.

Tert-butyl alcohol reported at 300 µg/l.

<sup>D</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B.  
1,2-dichloroethane reported at 98.4 µg/l.

<sup>E</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B.  
1,2-dichloroethane reported at 2.85 µg/l.

<sup>F</sup> = Oxygenates and lead scavengers analyzed by EPA Test Method 8260B.  
1,2-dichloroethane reported at 123 µg/l.

<sup>G</sup> = Sample collected from remediation piping immediatley prior to system shut down.





**Table 3. Well Construction Details**  
100 Brown Street  
Sebastopol, California

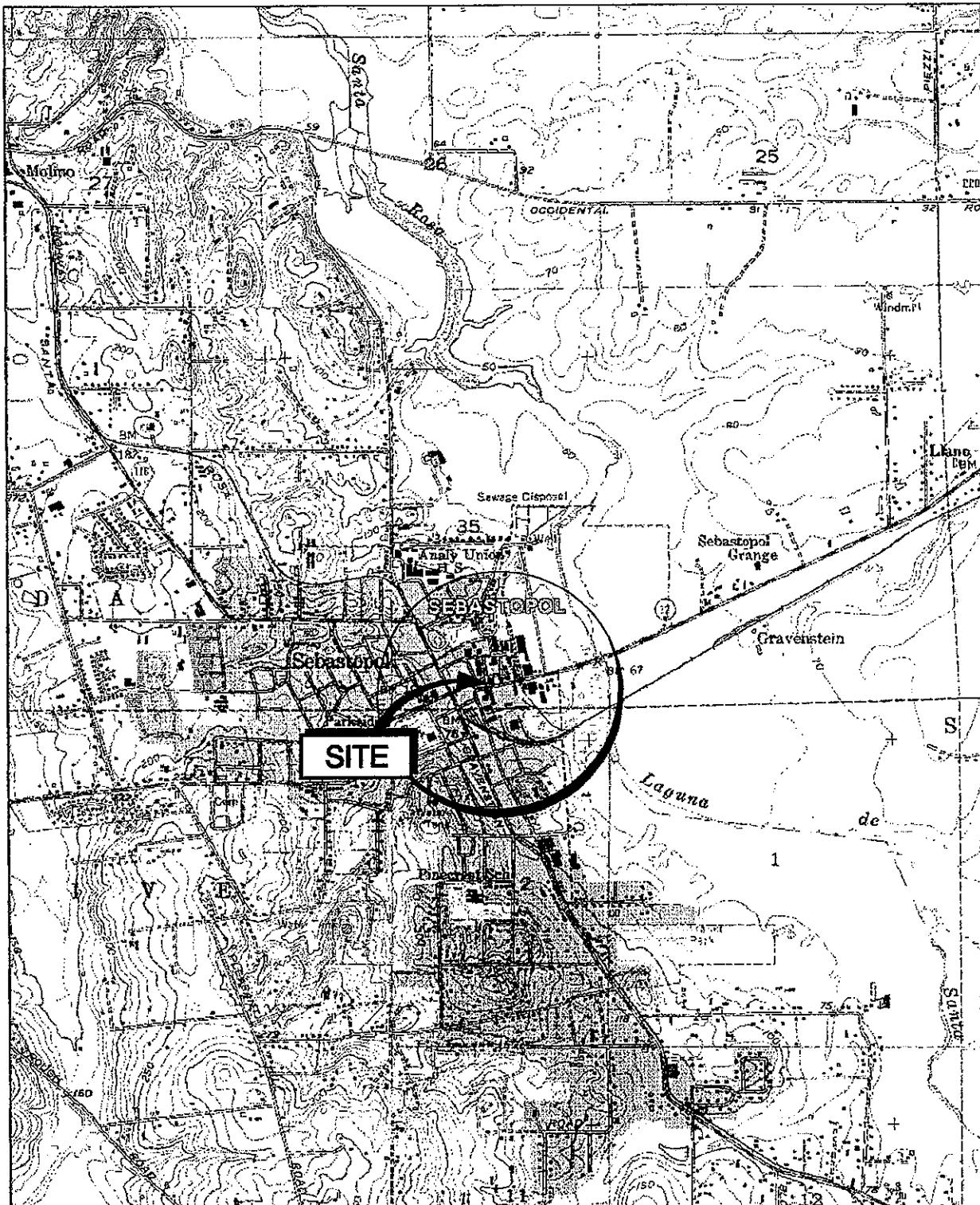
Well Number	Date Installed	Installed By	Borehole Diameter (inches)	Total Borehole Depth (feet)	Screened Interval (feet)	Total Well Depth (feet)	Casing Diameter (inches)	Screen Slot Size (inches)	PVC Casing Elevation * (MSL)	Existing or Date Abandoned
MW-1	04-Aug-94	BAI	8	25	10 to 25	25	2	0.020	77.27	Existing
MW-2	26-Aug-97	BAI	8	30	15 to 30	30	2	0.020	76.05	Existing
MW-3	27-Aug-97	BAI	8	30	13 to 30	30	2	0.020	75.94	Existing
MW-4	19-Feb-03	BAI	8	38	28 to 38	38	2	0.020	76.67	Existing
B-3	27-Aug-97	BAI	4	10	4 to 9	9	2	0.020	NS	Existing
B-4	26-Aug-97	BAI	4	10	4 to 9	9	2	0.020	NS	Existing
B-5	27-Aug-97	BAI	4	10	4 to 9	9	2	0.020	NS	Existing
B-6	26-Aug-97	BAI	4	10	4 to 9	9	2	0.020	NS	Existing
B-7	07-Sep-00	BAI	6	10.5	4 to 9	9	4	0.040	NS	Existing
B-8	07-Sep-00	BAI	6	10.5	4 to 9	9	4	0.040	NS	Existing
SP-1	07-Sep-00	BAI	6	35	32 to 35	35	1	0.010	NS	Existing

\* Survey performed by Phelps and Associates on November 8, 2000 and April 19, 2003.

NS = Not surveyed

## **PLATES**





Brunzing Associates,  
Inc.

Job No.: 383

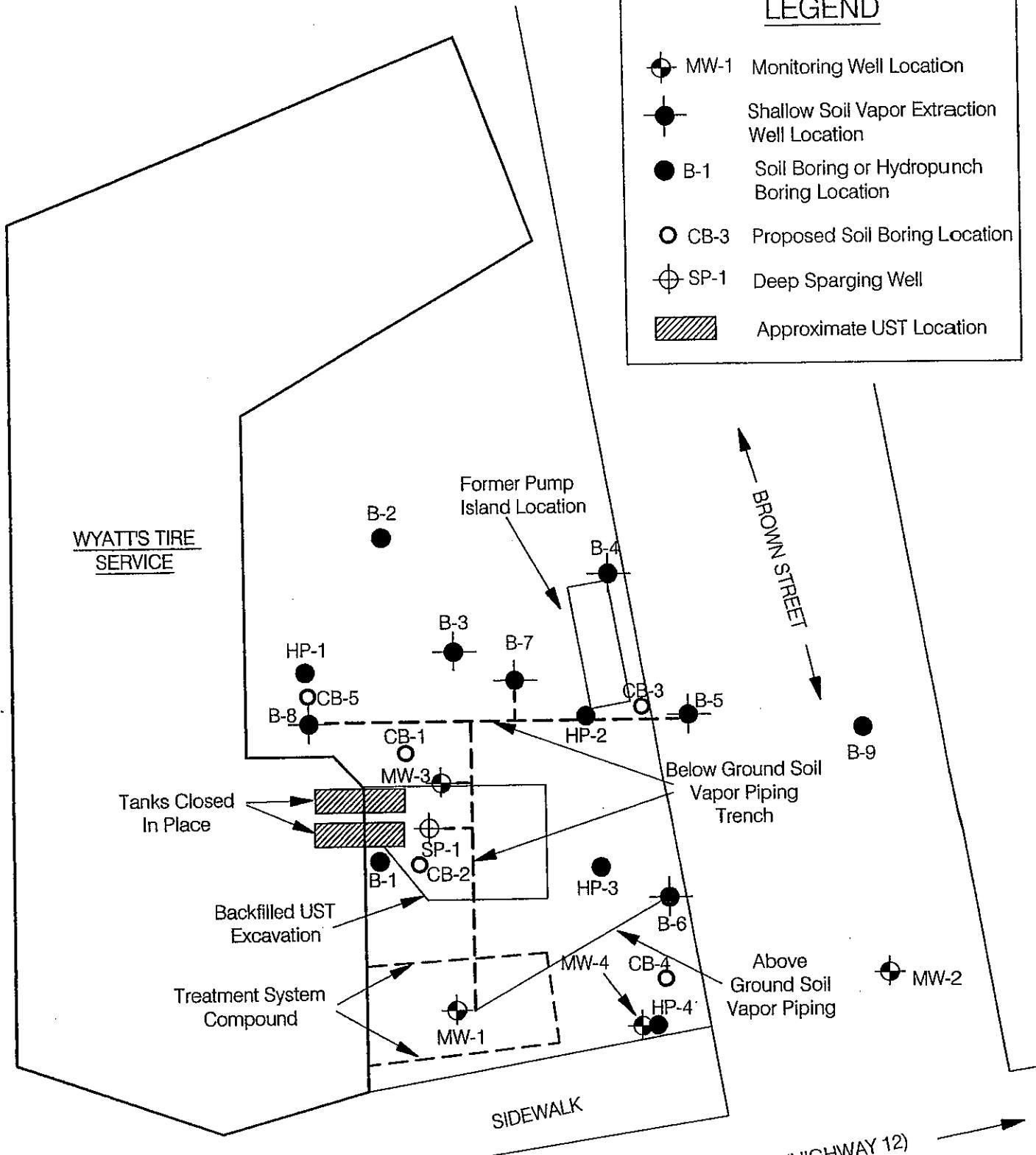
Appr.:

Date: 4/18/01

**SITE VICINITY MAP**  
100 Brown Street  
Sebastopol, California

PLATE

**1**



Reference: Ray Carlson and  
Associates, 4/11/03



Brunsing Associates, Inc.  
5803 Skylane Blvd., Suite A  
Windsor, California 95492  
Tel: (707) 838-3027

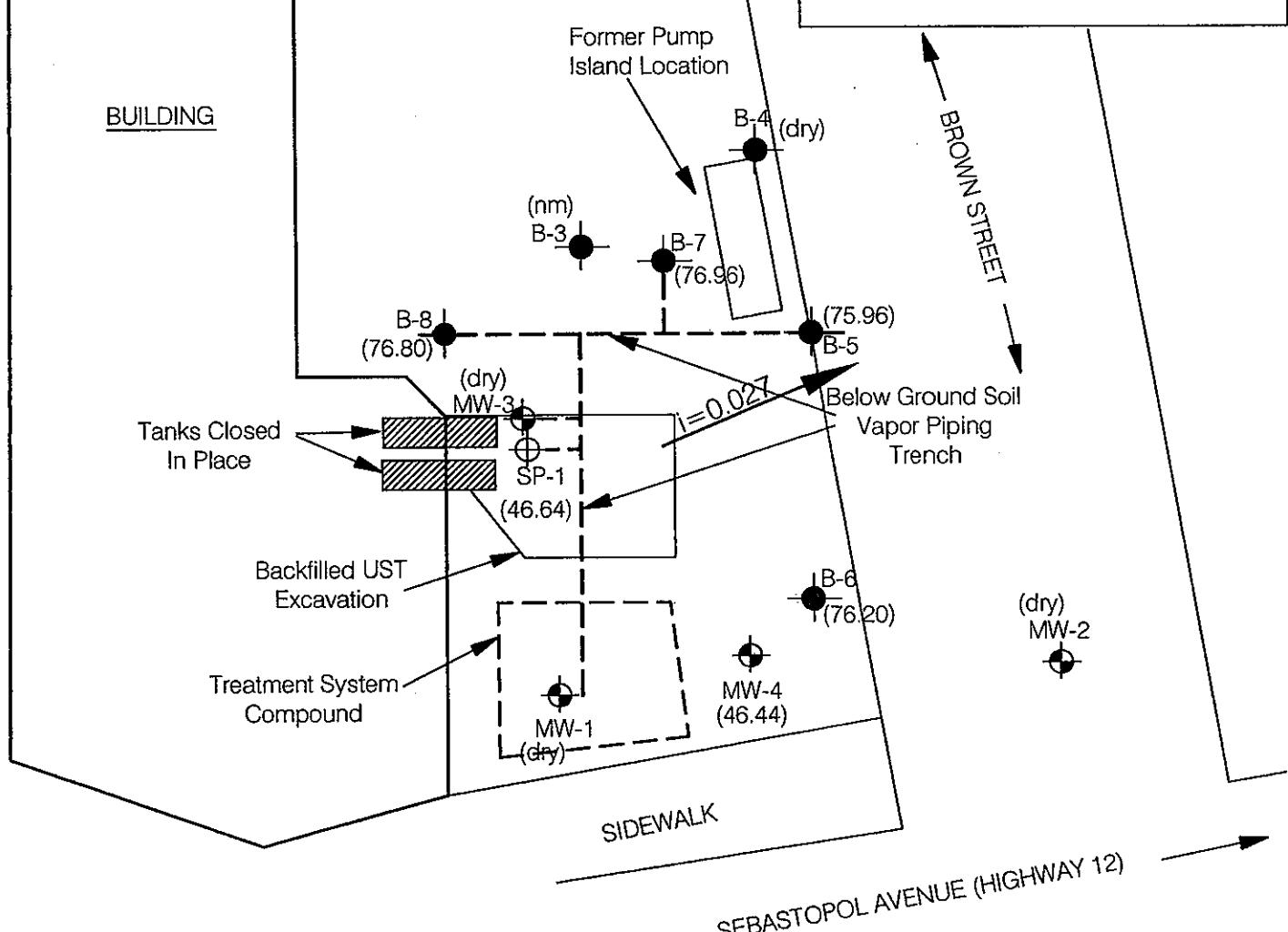
Job No.: 383.044  
Appr.: *[Signature]*  
Date: 11/9/04

**SITE MAP**  
100 Brown Street  
Sebastopol, California

PLATE  
**2**

## LEGEND

- MW-1 Monitoring well location
- B-5 (74.07) Shallow soil vapor extraction well location and groundwater elevation in feet above MSL
- B-1 Soil boring or hydropunch boring location
- SP-1 Deep sparging well
- ▨ Approximate UST location
- $i=0.130$  Calculated groundwater flow direction and gradient in ft/ft, using data from B-5, B-6 and B-8
- nm = not measured



APPROXIMATE SCALE (FEET)

0 7.5 15 30

Reference: Ray Carlson and  
Associates, 4/11/03



Brunsing Associates, Inc.  
5468 Skylane Blvd., Suite 201  
Santa Rosa, California 95403  
Tel: (707) 838-3027

Job No.: 383

Appr.: *OMS*

Date: 2/6/06

### GROUNDWATER ELEVATION MAP

JANUARY 6, 2006

100 Brown Street  
Sebastopol, California

PLATE

3

## **APPENDIX A**

### **Monitoring Well Sampling Protocol and Field Reports**



## **Monitoring Well Sampling Protocol**

### **Monitoring Wells**

Prior to purging a monitoring well, groundwater levels are measured with a Solinst electric depth measurement device, or an interface probe, in all wells that are to be measured. At sites where petroleum hydrocarbons are possible contaminants, the well is checked for floating product using a clear bailer, a steel tape with water/oil paste, or an interface probe, during the initial sampling round. If floating product is measured during the initial sampling round or noted during subsequent sampling rounds, floating product measurements are continued.

After the water level and floating product measurements are complete, the monitoring well is purged until a minimum of three casing volumes of water are removed, water is relatively clear of sediment, and pH, conductivity, and temperature measurements of the water become relatively stable. If the well is purged dry, groundwater samples are collected after the water level in the well recovers to at least 80 percent of the original water column measured in the well prior to sampling, or following a maximum recovery period of two hours. The well is purged using a factory-sealed, disposable, polyethylene bailer, a four-inch diameter submersible Grundfos pump, a two-inch diameter ES-40 purge pump, or a peristaltic pump. The purge water is stored on-site in clean, 55-gallon drums.

A groundwater sample is collected from each monitoring well following re-equilibration of the well after purging. The groundwater sample is collected using a factory-sealed disposable, polyethylene bailer with a sampling port, or a factory-sealed Teflon bailer. A factory provided attachment designed for use with volatile organic compounds (VOCs) is attached to the polyethylene bailer sampling port when collecting samples to be analyzed for VOCs. The groundwater sample is transferred from the bailer into sample container(s) that are obtained directly from the analytical laboratory.

The sample container(s) is labeled with a self-adhesive tag. The following information is included on the tag:

- Project number
- Sample number
- Date and time sample is collected
- Initials of sample collector(s).

Individual log sheets are maintained throughout the sampling operations. The following information is recorded:



- Sample number
- Date and time well sampled and purged
- Sampling location
- Types of sampling equipment used
- Name of sampler(s)
- Volume of water purged.

Following collection of the groundwater sample, the sample is immediately stored on blue ice in an appropriate container. A chain-of-custody form is completed with the following information:

- Date the sample was collected
- Sample number and the number of containers
- Analyses required
- Remarks including preservatives added and any special conditions.

The original copy of the chain-of-custody form accompanies the sample containers to a California-certified laboratory. A copy is retained by BAI and placed in company files.

Sampling equipment including thermometers, pH electrodes, and conductivity probes are cleaned both before and after their use at the site. The following cleaning procedures are used:

- Scrub with a potable water and detergent solution or other solutions deemed appropriate using a hard bristle brush
- Rinse with potable water
- Double-rinse with organic-free or deionized water
- Package and seal equipment in plastic bags or other appropriate containers to prevent contact with solvents, dust, or other contaminants.

In addition, the pumps are cleaned by pumping a potable water and detergent solution and deionized water through the system. Cleaning solutions are contained on-site in clean 55-gallon drums.

### Domestic and Irrigation Wells

Groundwater samples collected from domestic or irrigation wells are collected from the spigot that is the closest to the well. Prior to collecting the sample, the spigot is allowed to flow for at least 5 minutes to purge the well. The sample is then collected directly into laboratory-supplied containers, sealed, labeled, and stored on blue ice in an appropriate container, as described above. A chain-of-custody form is completed and submitted with the samples to the analytical laboratory.



UST      X Yes  
Fund Site:      No

# FIELD REPORT

**FILE COPY**

JOB NO: 383 PROJECT: Wyatt Tire - 100 Brown St. Sebastopol, CA  
INITIAL: *eg* SUBJECT: Groundwater Sampling  
DATE: *1/6/04* PROJECT PHASE NUMBER: 04  
VEHICLE USED: *2003 Chevy*

PAGE 1 OF 7

Total Time: 5.5

End. Mileage: 48211

Beg. Mileage: 48,180

TOTAL MILEAGE: 31

TIME	DESCRIPTION OF WORK AND CONVERSATION RECORD
935	Arrived on site Measured Two Rounds of PTW at wells - MW-1, 2, 3, 4 SP1, B-4, 5, 6, 7, 8. Wells MW-1, 2 + 3 are dry Sampled wells Stored Purge water in drum on site - 8 drums on site no water for SP1, well B-8 went dry at 1 gal. Samples taken for B. closed all wells Decoupled equipment loaded truck
1505	Departed site
	DRUM COUNT:
	Water = Devlpmt Water =
	Soil = Decon Water =



## WATER LEVELS

SHEET        OF

**PROJECT:** 100 Brown Street, Sebastopol, California

**PROJECT NUMBER:** 383

INSTRUMENT TYPE: Fluorometer

INITIALS: gk DATE: 1/4/00

# WELL SAMPLING

SHEET      OF

PROJECT: Wyatt Tire

PROJECT NUMBER: 383.024

WELL # MW-4 PRECIP. IN LAST 5 DAYS: Yes WIND ↗ DATE: 1/6/00

STARTING TIME: 1135 FINISHING TIME: 1154

INITIALS: *gj*

## CALCULATION OF PURGE VOLUME

" WELL DEPTH: 38.00 - D.T.W. 52.75 = H<sub>2</sub>O COLUMN: 5.25 X 0.5 = 2.62 GALLONS

" WELL DEPTH: [ ] - D.T.W. [ ] = H<sub>2</sub>O COLUMN: [ ] X 2.0 = [ ] GALLONS

HEREFORE TOTAL PURGE GALLONS EQUALS [ ]

3

## FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1141	1	9.21	528	22.7	gray, no odor, sandy
1143	2	9.07	451	22.8	gray, no odor, sandy
1147	3	9.20	458	23.2	gray, no odor, sandy

SAMPLING: SAMPLE ANALYSIS: TPH-G EPA-8260

SAMPLE TIME: 1152 DID WELL GO DRY? NO

WATER LEVELS:		NOTES:
TIME	D.T.W.	
1154	33.81	

# WELL SAMPLING

SHEET OF

PROJECT: Wyatt Tire - 100 Brown Street, Sebastopol, CA

PROJECT NUMBER: 383

WELL # B-5 PRECIP. IN LAST 5 DAYS: Yes WIND N°

DATE: 1/4/06

STARTING TIME: 1242 FINISHING TIME: 1422

INITIALS: gj

## CALCULATION OF PURGE VOLUME

GALLONS

2" WELL DEPTH: 7.92 - D.T.W. 2.23 = H2O COLUMN: 5.69 X 0.5 = 2.85

4" WELL DEPTH:    - D.T.W.    = H2O COLUMN:    X 2.0 =   

THEREFORE TOTAL PURGE GALLONS EQUALS 3

## FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1245	1	7.32	317	17.4°	gray, no odor
1253	2	7.39	316	17.3°	gray, no odor, sandy
1414	3	7.83	310	15.9°	gray, no odor, sandy

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)   

SAMPLE TIME: 1818 DID WELL GO DRY? Yes

WATER LEVELS:		NOTES:
TIME	D.T.W.	
1407	6.13	
1422	7.47	

## **WELL SAMPLING**

SHEET OF

**PROJECT:** Wyatt Tire - 100 Brown Street, Sebastopol, CA

PROJECT NUMBER: 383

WELL # B-6 PRECIP. IN LAST 5 DAYS: yes WIND NO

DATE: 1/6/04

STARTING TIME: 12:53 FINISHING TIME: 13:25

INITIALS: *EJ*

## **CALCULATION OF PURGE VOLUME**

GALLONS

2" WELL DEPTH: 8.70 - D.T.W. 8.76 = H2O COLUMN: 5.94 X 0.5 = 2.97

4" WELL DEPTH:  - D.T.W.  = H2O COLUMN:  X 2.0 =

THEREFORE TOTAL PURGE GALLONS EQUALS

3

## FIELD MEASUREMENTS

<u>TIME</u>	<u>GALLONS REMOVED</u>	<u>pH</u>	<u>CONDUCTIVITY</u>	<u>TEMP.</u>	<u>OBSERVATIONS</u>
1259	1	7.51	366	16.5	gray, PHC odor
1307	2	7.85	364	16.3	gray, PHC odor - sandy
1314	3	7.81	353	16.4	gray, PHC odor - sandy

#### **SAMPLING:**

SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: **13/4** DID WELL GO DRY? **NO**

#### **WATER LEVELS:**

**NOTES:**

TIME D.T.W.

CS25 6.37

—  
—

# WELL SAMPLING

SHEET      OF

PROJECT: Wyatt Tire - 100 Brown Street, Sebastopol, CA

PROJECT NUMBER: 383

WELL # B-7 PRECIP. IN LAST 5 DAYS: Yes WIND NO

DATE: 1/6/04

STARTING TIME: 1328 FINISHING TIME: 1351

INITIALS: gl

## CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H<sub>2</sub>O COLUMN: [ ] X 0.5 = [ ] GALLONS

4" WELL DEPTH: [7.75] - D.T.W. [1.44] = H<sub>2</sub>O COLUMN: [6.31] X 2.0 = [12.62] GALLONS

THEREFORE TOTAL PURGE GALLONS EQUALS [13]

G  
A  
L  
L  
O  
N  
S

## FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1331	1	8.94	95	15.4°	DARK Brown, PHC odor
1336	6	8.84	103	14.4°	DARK Brown, PHC odor, sandy
1340	13	8.84	116	14.1°	DARK Brown, PHC odor, sandy

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1442 DID WELL GO DRY? NO

WATER LEVELS:		NOTES:
TIME	D.T.W.	
1351	7.01	

# WELL SAMPLING

SHEET      OF

PROJECT: Wyatt Tire - 100 Brown Street, Sebastopol, CA

PROJECT NUMBER: 383

WELL # B-8 PRECIP. IN LAST 5 DAYS: yes WIND ↗

DATE: 1/6/06

STARTING TIME: 1352 FINISHING TIME: 1451

INITIALS: JC

## CALCULATION OF PURGE VOLUME

2" WELL DEPTH: [ ] - D.T.W. [ ] = H<sub>2</sub>O COLUMN: [ ] X 0.5 = [ ] GALLONS

4" WELL DEPTH: [7.42] - D.T.W. [2.05] = H<sub>2</sub>O COLUMN: [5.37] X 2.0 = [10.74] GALLONS

THEREFORE TOTAL PURGE GALLONS EQUALS [11]

## FIELD MEASUREMENTS

TIME	GALLONS REMOVED	pH	CONDUCTIVITY	TEMP.	OBSERVATIONS
1400	1	8.37	367	13.8°	DARK Brown, PHC odor,
1405	5	8.33	364	14.0°	DARK Brown, PHC odor, sandy
1443	7	7.93	352	14.1°	DARK Brown, PHC odor, sandy
	11				

SAMPLING: SAMPLE ANALYSIS: TPH-Gas, 8260B (BTEX, petro oxy & Pb scav)

SAMPLE TIME: 1445 DID WELL GO DRY? yes

## WATER LEVELS:

NOTES:

TIME	D.T.W.
------	--------

1451	6.89
------	------

## **APPENDIX B**

### **Analytical Laboratory Report**



## Laboratory Report Project Overview

EDF 1.2a

Laboratory:  
Bace Analytical, Windsor, CA  
Lab Report Number:  
4731  
Project Name:  
100 BROWN ST.  
Work Order Number:  
383.030  
Control Sheet Number:  
NA

Bace Analytical, Windsor, CA  
4731  
100 BROWN ST.  
383.030  
NA

FILE COPY

## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anicode	Exicode	Logdate	Exdate	Anadate	Lablotct	Run Sub
4731	B-5	4731-2	W	CS	8260FAB	SW5030B	01/06/200	01/18/200	20060118	26	
4731	B-5	4731-2	W	CS	8260TPH	SW5030B	01/06/200	01/18/200	20060118	26	
4731	B-6	4731-3	W	CS	8260FAB	SW5030B	01/06/200	01/18/200	01/18/200	20060118	27
4731	B-6	4731-3	W	CS	8260TPH	SW5030B	01/06/200	01/18/200	01/18/200	20060118	27
4731	B-7	4731-4	W	CS	8260FAB	SW5030B	01/06/200	01/19/200	01/19/200	20060119	30
4731	B-7	4731-4	W	CS	8260TPH	SW5030B	01/06/200	01/19/200	01/19/200	20060119	30
4731	B-8	4731-5	W	CS	8260FAB	SW5030B	01/06/200	01/19/200	01/19/200	20060119	30
4731	B-8	4731-5	W	CS	8260TPH	SW5030B	01/06/200	01/19/200	01/19/200	20060119	25
4731	MW-4	4731-1	W	CS	8260FAB	SW5030B	01/06/200	01/18/200	01/18/200	20060118	25
4731	MW-4	4731-1	W	CS	8260TPH	SW5030B	01/06/200	01/18/200	01/18/200	20060118	25
4735	4735-6	W	NC	8260FAB	SW5030B	/ /	01/18/200	01/18/200	20060118	9	
4735	4735-8	W	NC	8260TPH	SW5030B	/ /	01/18/200	01/18/200	20060118	12	
4739	4739-1	W	NC	8260FAB	SW5030B	/ /	01/18/200	01/18/200	20060118	12	
4739	4739-4	W	NC	8260TPH	SW5030B	/ /	01/19/200	01/19/200	20060119	9	
4731MB	4731MB	W	LB1	8260FAB	SW5030B	/ /	01/18/200	01/18/200	20060118	2	
4731MB	4731MB	W	LB1	8260TPH	SW5030B	/ /	01/18/200	01/18/200	20060118	2	
4731MB	4731MB	W	LB2	8260FAB	SW5030B	/ /	01/19/200	01/19/200	20060119	2	
4731MS	4731MS	W	MS1	8260FAB	SW5030B	/ /	01/18/200	01/18/200	20060118	10	
4731MS	4731MS	W	MS1	8260TPH	SW5030B	/ /	01/18/200	01/18/200	20060118	13	

## Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anicode	Exmcode	Logdate	Exdate	Anadate	Labioltcl	Run Sub
	4731MS		W	MS2 8260FAB	SW5030B	/ /	01/19/200	01/19/200	20060119	10	
	4731MS		W	MS2 8260TPH	SW5030B	/ /	01/19/200	01/19/200	20060119	13	
	4731SD		W	SD1 8260FAB	SW5030B	/ /	01/18/200	01/18/200	20060118	11	
	4731SD		W	SD1 8260TPH	SW5030B	/ /	01/18/200	01/18/200	20060118	14	
	4731SD		W	SD2 8260FAB	SW5030B	/ /	01/19/200	01/19/200	20060119	11	
	4731SD		W	SD2 8260TPH	SW5030B	/ /	01/19/200	01/19/200	20060119	14	

Project Name:	100 BROWN ST.	Analysis:	VOCs by GC/MS Fuel Additives Plus BTEX			
Project No:	383.030	Method:	8260FAB			
		Prep Meth:	SW5030B			
Field ID:	B-5	Lab Samp ID:	4731-2			
Descr/Location:	B-5	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/18/2006			
Sample Time:	1418	Analysis Date:	01/18/2006			
Matrix:	Water	QC Batch:	20060118			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	3.8	10.	PQL	802	UG/L	10
Ethyl tert-butyl ether (ETBE)	3.0	10.	PQL	ND	UG/L	10
tert-Amyl methyl ether (TAME)	2.6	10.	PQL	ND	UG/L	10
Di-isopropyl ether (DIPE)	3.7	10.	PQL	ND	UG/L	10
tert-Butyl alcohol (TBA)	24.	100.	PQL	ND	UG/L	10
1,2-Dichloroethane	3.0	5.0	PQL	ND	UG/L	10
1,2-Dibromoethane	3.0	5.0	PQL	ND	UG/L	10
Benzene	2.7	5.0	PQL	55.4	UG/L	10
Toluene	2.5	5.0	PQL	26.9	UG/L	10
Ethylbenzene	2.5	5.0	PQL	10.3	UG/L	10
Xylenes	2.5	5.0	PQL	210.	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene		86-118	SLSA		92%	1
Toluene-d8		88-110	SLSA		98%	1
Dibromofluoromethane		86-115	SLSA		94%	1

Approved by:

*Wesley H. Pott*Date: 1/23/06

Project Name:	100 BROWN ST.	Analysis: VOCs by GC/MS Fuel Additives Plus BTEX				
Project No:	383.030	Method: 8260FAB				
		Prep Meth: SW5030B				
Field ID:	B-6	Lab Samp ID: 4731-3				
Descr/Location:	B-6	Rec'd Date: 01/06/2006				
Sample Date:	01/06/2006	Prep Date: 01/18/2006				
Sample Time:	1316	Analysis Date: 01/18/2006				
Matrix:	Water	QC Batch: 20060118				
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	38.	100.	PQL	DX	ND	UG/L 100
Ethyl tert-butyl ether (ETBE)	30.	100.	PQL		ND	UG/L 100
tert-Amyl methyl ether (TAME)	26.	100.	PQL		ND	UG/L 100
Di-isopropyl ether (DIPE)	37.	100.	PQL		ND	UG/L 100
tert-Butyl alcohol (TBA)	240.	1000.	PQL		ND	UG/L 100
1,2-Dichloroethane	30.	50.	PQL		ND	UG/L 100
1,2-Dibromoethane	30.	50.	PQL		ND	UG/L 100
Benzene	27.	50.	PQL		176.	UG/L 100
Toluene	25.	50.	PQL		2740.	UG/L 100
Ethylbenzene	25.	50.	PQL		4980.	UG/L 100
Xylenes	25.	50.	PQL		29800.	UG/L 100
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene		86-118	SLSA		92%	1
Toluene-d8		88-110	SLSA		97%	1
Dibromofluoromethane		86-115	SLSA		96%	1
DX: Value < lowest standard (MQL), but > than MDL						

Approved by:

*W. L. Brown Jr. / P. O. Tally*

Date:

*1/23/06*

Project Name:	100 BROWN ST.	Analysis: VOCs by GC/MS Fuel Additives Plus BTEX				
Project No:	383.030	Method: 8260FAB				
		Prep Meth: SW5030B				
Field ID:	B-7	Lab Samp ID:	4731-4			
Descr/Location:	B-7	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/19/2006			
Sample Time:	1442	Analysis Date:	01/19/2006			
Matrix:	Water	QC Batch:	20060119			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	0.76	2.0	PQL	DX	UG/L	2
Ethyl tert-butyl ether (ETBE)	0.60	2.0	PQL	ND	UG/L	2
tert-Amyl methyl ether (TAME)	0.52	2.0	PQL	ND	UG/L	2
Di-isopropyl ether (DIPE)	0.74	2.0	PQL	ND	UG/L	2
tert-Butyl alcohol (TBA)	4.8	20.	PQL	ND	UG/L	2
1,2-Dichloroethane	0.60	1.0	PQL	ND	UG/L	2
1,2-Dibromoethane	0.60	1.0	PQL	ND	UG/L	2
Benzene	0.54	1.0	PQL	ND	UG/L	2
Toluene	0.50	1.0	PQL	1.32	UG/L	2
Ethylbenzene	0.50	1.0	PQL	ND	UG/L	2
Xylenes	0.50	1.0	PQL	1.44	UG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene		86-118	SLSA	98%		1
Toluene-d8		88-110	SLSA	103%		1
Dibromofluoromethane		86-115	SLSA	100%		1
DX: Value < lowest standard (MQL), but > than MDL						

Approved by:

*Wasson & Pott*Date: 1/23/06

Lab Report No.: 4731 Date: 01/23/2006

Project Name: 100 BROWN ST.  
 Project No: 383.030

Analysis: VOCs by GC/MS Fuel Additives Plus BTEX  
 Method: 8260FAB  
 Prep Meth: SW5030B

Field ID: B-8  
 Descr/Location: B-8  
 Sample Date: 01/06/2006  
 Sample Time: 1445  
 Matrix: Water  
 Basis: Not Filtered

Lab Samp ID: 4731-5  
 Rec'd Date: 01/06/2006  
 Prep Date: 01/19/2006  
 Analysis Date: 01/19/2006  
 QC Batch: 20060119  
 Notes:

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	7.6	20.	PQL	24.1	UG/L	20
Ethyl tert-butyl ether (ETBE)	6.0	20.	PQL	ND	UG/L	20
tert-Amyl methyl ether (TAME)	5.2	20.	PQL	ND	UG/L	20
Di-isopropyl ether (DIPE)	7.4	20.	PQL	ND	UG/L	20
tert-Butyl alcohol (TBA)	48.	200.	PQL	ND	UG/L	20
1,2-Dichloroethane	6.0	10.	PQL	ND	UG/L	20
1,2-Dibromoethane	6.0	10.	PQL	ND	UG/L	20
Benzene	5.4	10.	PQL	84.4	UG/L	20
Toluene	5.0	10.	PQL	856.	UG/L	20
Ethylbenzene	5.0	10.	PQL	430.	UG/L	20
Xylenes	5.0	10.	PQL	1970.	UG/L	20
<b>SURROGATE AND INTERNAL STANDARD RECOVERIES:</b>						
4-Bromofluorobenzene		86-118	SLSA	91%		1
Toluene-d8		88-110	SLSA	96%		1
Dibromofluoromethane		86-115	SLSA	95%		1

Approved by:

*Wesley R. Potts*Date: 1/23/06

Project Name:	100 BROWN ST.	Analysis: VOCs by GC/MS Fuel Additives Plus BTEX				
Project No:	383.030	Method: 8260FAB				
		Prep Meth: SW5030B				
Field ID:	MW-4	Lab Samp ID:	4731-1			
Descr/Location:	MW-4	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/18/2006			
Sample Time:	1152	Analysis Date:	01/18/2006			
Matrix:	Water	QC Batch:	20060118			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	3.8	10.	PQL	ND	UG/L	10
Ethyl tert-butyl ether (ETBE)	3.0	10.	PQL	ND	UG/L	10
tert-Amyl methyl ether (TAME)	2.6	10.	PQL	ND	UG/L	10
Di-isopropyl ether (DIPE)	3.7	10.	PQL	ND	UG/L	10
tert-Butyl alcohol (TBA)	24.	100.	PQL	ND	UG/L	10
1,2-Dichloroethane	3.0	5.0	PQL	ND	UG/L	10
1,2-Dibromoethane	3.0	5.0	PQL	ND	UG/L	10
Benzene	2.7	5.0	PQL			
Toluene	2.5	5.0	PQL	5.54	UG/L	10
Ethylbenzene	2.5	5.0	PQL	448	UG/L	10
Xylenes	2.5	5.0	PQL	6.23	UG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene		86-118	SLSA	94%		1
Toluene-d8		88-110	SLSA	98%		1
Dibromofluoromethane		86-115	SLSA	96%		1

Approved by:

*Wesley R. Potts*

Date:

*1/23/06*

## Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 6

Project Name:	100 BROWN ST.	Analysis:	Total Petroleum Hydrocarbons (TPH) by GC/MS			
Project No:	383.030	Method:	8260TPH			
		Prep Meth:	SW5030B			
Field ID:	B-5	Lab Samp ID:	4731-2			
Descr/Location:	B-5	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/18/2006			
Sample Time:	1418	Analysis Date:	01/18/2006			
Matrix:	Water	QC Batch:	20060118			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.40	0.50	PQL	29	MG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:				1		
4-Bromofluorobenzene	70-130	SLSA		92%		

Approved by:

*Wesley A. Potts*Date: 1/23/06

## Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 7

Project Name:	100 BROWN ST.	Analysis:	Total Petroleum Hydrocarbons (TPH) by GC/MS			
Project No:	383.030	Method:	8260TPH			
		Prep Meth:	SW5030B			
Field ID:	B-6	Lab Samp ID:	4731-3			
Descr/Location:	B-6	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/18/2006			
Sample Time:	1316	Analysis Date:	01/18/2006			
Matrix:	Water	QC Batch:	20060118			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	4.0	5.0	PQL	60.	MG/L	100
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene	70-130	SLSA		92%		1

Approved by:

*Wesley H. Potts*

Date:

*1/23/06*

## Bace Analytical, Windsor, CA

Page: 8

Lab Report No.: 4731 Date: 01/23/2006

Project Name:	100 BROWN ST.	Analysis:	Total Petroleum Hydrocarbons (TPH) by GC/MS			
Project No:	383.030	Method:	8260TPH			
		Prep Meth:	SW5030B			
Field ID:	B-7	Lab Samp ID:	4731-4			
Descr/Location:	B-7	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/19/2006			
Sample Time:	1442	Analysis Date:	01/19/2006			
Matrix:	Water	QC Batch:	20060119			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.08	0.10	PQL	0.13	MG/L	2
SURROGATE AND INTERNAL STANDARD RECOVERIES:				98%		1
4-Bromofluorobenzene				70-130	SLSA	

Approved by:

*Wesley A. Rott*Date: 1/23/06

## Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 9

Project Name:	100 BROWN ST.	Analysis:	Total Petroleum Hydrocarbons (TPH) by GC/MS			
Project No:	383.030	Method:	8260TPH			
		Prep Meth:	SW5030B			
Field ID:	B-8	Lab Samp ID:	4731-5			
Descr/Location:	B-8	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/19/2006			
Sample Time:	1445	Analysis Date:	01/19/2006			
Matrix:	Water	QC Batch:	20060119			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.80	1.0	PQL	11.	MG/L	20
SURROGATE AND INTERNAL STANDARD RECOVERIES:				1		
4-Bromofluorobenzene	86-115	SLSA		91%		

Approved by: Wesley H. Potts Date: 1/23/06

## Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 10

Project Name:	100 BROWN ST.	Analysis:	Total Petroleum Hydrocarbons (TPH) by GC/MS			
Project No:	383.030	Method:	8260TPH			
		Prep Meth:	SW5030B			
Field ID:	MW-4	Lab Samp ID:	4731-1			
Descr/Location:	MW-4	Rec'd Date:	01/06/2006			
Sample Date:	01/06/2006	Prep Date:	01/18/2006			
Sample Time:	1152	Analysis Date:	01/18/2006			
Matrix:	Water	QC Batch:	20060118			
Basis:	Not Filtered	Notes:				
Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.40	0.50	PQL	2.1	MG/L	10
SURROGATE AND INTERNAL STANDARD RECOVERIES:				94%		
4-Bromofluorobenzene				70-130	SLSA	1

Approved by:

*Wesley H. Post*

Date:

*1/23/06*

**QA/QC Report**  
**Method Blank Summary**

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 11

QC Batch:	20060118	Analysis: VOCs by GC/MS Fuel Additives Plus BTEX					
Matrix:	Water	Method: 8260FAB					
Lab Samp ID:	4731MB	Prep Meth: SW5030B					
Analysis Date:	01/18/2006	Prep Date: 01/18/2006					
Basis:	Not Filtered	Notes:					
Analyte		Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)		0.38	1.0	PQL	ND	UG/L	1
Ethyl tert-butyl ether (ETBE)		0.30	1.0	PQL	ND	UG/L	1
tert-Amyl methyl ether (TAME)		0.26	1.0	PQL	ND	UG/L	1
Di-isopropyl ether (DIPE)		0.37	1.0	PQL	ND	UG/L	1
tert-Butyl alcohol (TBA)		2.4	10.	PQL	ND	UG/L	1
1,2-Dichloroethane		0.30	0.50	PQL	ND	UG/L	1
1,2-Dibromoethane		0.30	0.50	PQL	ND	UG/L	1
Benzene		0.27	0.50	PQL	ND	UG/L	1
Toluene		0.25	0.50	PQL	ND	UG/L	1
Ethylbenzene		0.25	0.50	PQL	ND	UG/L	1
Xylenes		0.25	0.50	PQL	ND	UG/L	1
<b>SURROGATE AND INTERNAL STANDARD RECOVERIES:</b>							
4-Bromofluorobenzene		86-118	SLSA		92%		1
Toluene-d8		88-110	SLSA		97%		1
Dibromofluoromethane		86-115	SLSA		93%		1

QA/QC Report  
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 12

QC Batch: 20060118  
Matrix: Water  
Lab Samp ID: 4731MB  
Analysis Date: 01/18/2006  
Basis: Not Filtered

Analysis: Total Petroleum Hydrocarbons (TPH) by  
Method: 8260TPH  
Prep Meth: SW5030B  
Prep Date: 01/18/2006  
Notes:

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.04	0.05	PQL	ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene	70-130	SLSA		92%		1

**QA/QC Report**  
**Matrix Spike/Duplicate Matrix Spike Summary**

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 13

Analyte	Analysis Method	Spike Level		Sample Result	Spike Result MS	Spike Result DMS	Units	% Recoveries			Acceptance Criteria	RPD
		MS	DMS					MS	DMS	RPD		
1,2-Dibromoethane	8260FAB	10.0	10.0	ND	9.34	10.1	UG/L	93.4	101	7.8	130-70	MSA 20MSP
1,2-Dichloroethane	8260FAB	10.0	10.0	ND	8.69	9.42	UG/L	86.9	94.2	8.1	130-70	MSA 20MSP
Benzene	8260FAB	10.0	10.0	ND	9.83	11.2	UG/L	98.3	112	13	127-76	MSA 20MSP
Di-isopropyl ether (DIPE)	8260FAB	10.0	10.0	ND	7.49	7.73	UG/L	74.9	77.3	3.2	130-70	MSA 20MSP
Ethyl tert-butyl ether (ETBE)	8260FAB	10.0	10.0	ND	7.91	8.13	UG/L	79.1	81.3	2.7	130-70	MSA 20MSP
Ethylbenzene	8260FAB	10.0	10.0	ND	9.66	10.7	UG/L	96.6	107	10	130-70	MSA 20MSP
Methyl-tert-butyl ether (MTBE)	8260FAB	10.0	10.0	ND	7.70	7.82	UG/L	77.0	78.2	1.5	130-70	MSA 20MSP
Toluene	8260FAB	10.0	10.0	ND	10.0	11.2	UG/L	100	112	11	125-76	MSA 20MSP
Xylenes	8260FAB	30.0	30.0	ND	29.6	32.6	UG/L	98.7	109	9.9	130-70	MSA 20MSP
tert-Amyl methyl ether (TAME)	8260FAB	10.0	10.0	ND	7.99	8.22	UG/L	79.9	82.2	2.8	130-70	MSA 20MSP
tert-Butyl alcohol (TBA)	8260FAB	50.0	50.0	ND	32.5	33.2	UG/L	65.0	66.4	2.1	140-60	MSA 25MSP
4-Bromofluorobenzene	8260FAB	100.	100.	93.	92.	92.	PERCENT	92.0	92.0	0.00	118-86	SLSA 20SLSP
Dibromofluoromethane	8260FAB	100.	100.	93.	94.	95.	PERCENT	94.0	95.0	1.1	115-86	SLSA 20SLSP
Toluene-d8	8260FAB	100.	100.	97.	98.	97.	PERCENT	98.0	97.0	1.0	110-88	SLSA 20SLSP

**QA/QC Report**  
**Matrix Spike/Duplicate Matrix Spike Summary**

Bace Analytical, Windsor, CA

Page: 14

Lab Report No.: 4731 Date: 01/23/2006

Analyte	Analysis Method	Spike Level		Sample Result	Spike Result MS	Units	% Recoveries MS DMS RPD	% Rec	Acceptance Criteria	RPD
		MS	DMS							
Gasoline Range Organics (C5-C12)	8260TPH	0.50	0.50	ND	0.42	0.42	MG/L	84.0	84.0	0.00
4-Bromofluorobenzene	8260TPH	100.	100.	94.	92.	92.	PERCENT	92.0	92.0	0.00
								130-70	130-70	MSA
								SLSA	SLSA	20 SLSPL

**QA/QC Report**  
**Method Blank Summary**

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 15

Analysis: VOCs by GC/MS Fuel Additives Plus BTEX

Method: 8260FAB

Prep Meth: SW5030B

Prep Date: 01/19/2006

Notes:

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Methyl-tert-butyl ether (MTBE)	0.38	1.0	PQL	ND	UG/L	1
Ethyl tert-butyl ether (ETBE)	0.30	1.0	PQL	ND	UG/L	1
tert-Amyl methyl ether (TAME)	0.26	1.0	PQL	ND	UG/L	1
Di-isopropyl ether (DIPE)	0.37	1.0	PQL	ND	UG/L	1
tert-Butyl alcohol (TBA)	2.4	10.	PQL	ND	UG/L	1
1,2-Dichloroethane	0.30	0.50	PQL	ND	UG/L	1
1,2-Dibromoethane	0.30	0.50	PQL	ND	UG/L	1
Benzene	0.27	0.50	PQL	ND	UG/L	1
Toluene	0.25	0.50	PQL	ND	UG/L	1
Ethylbenzene	0.25	0.50	PQL	ND	UG/L	1
Xylenes	0.25	0.50	PQL	ND	UG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES:						
4-Bromofluorobenzene	86-118	SLSA		94%		1
Toluene-d8	88-110	SLSA		97%		1
Dibromofluoromethane	86-115	SLSA		92%		1

QA/QC Report  
Method Blank Summary

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 16

QC Batch: 20060119  
Matrix: Water  
Lab Samp ID: 4731MB  
Analysis Date: 01/19/2006  
Basis: Not Filtered

Analysis: Total Petroleum Hydrocarbons (TPH) by  
Method: 8260TPH  
Prep Meth: SW5030B  
Prep Date: 01/19/2006  
Notes:

Analyte	Det Limit	Rep Limit	Note	Result	Units	Pvc Dil
Gasoline Range Organics (C5-C12)	0.04	0.05	PQL	ND	MG/L	1
SURROGATE AND INTERNAL STANDARD RECOVERIES: 4-Bromofluorobenzene		70-130	SLSA	94%		1

**QA/QC Report**  
**Matrix Spike/Duplicate Matrix Spike Summary**

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 17

QC Batch: 20060119  
 Matrix: Water  
 Lab Samp ID: 4731MS  
 Basis: Not Filtered

Project Name: Lab Generated or Non COE Sample  
 Project No.: Lab Generated or Non COE Sample  
 Field ID: Lab Generated or Non COE Sample  
 Lab Ref ID: 4739-1

Analyte	Analysis Method	Spike Level MS	Sample Result	Spike Result MS	Units	% Recoveries			Acceptance Criteria	RPD			
						MS	DMS	RPD					
1,2-Dibromoethane	8260FAB	10.0	ND	9.43	10.4	UG/L	94.3	104	9.8	130-70	MSA	20MSP	
1,2-Dichloroethane	8260FAB	10.0	10.0	8.39	9.86	UG/L	83.9	98.6	16	130-70	MSA	20MSP	
Benzene	8260FAB	10.0	10.0	9.91	10.8	UG/L	99.1	108	8.6	127-76	MSA	20MSP	
Di-isopropyl ether (DIPE)	8260FAB	10.0	ND	7.22	7.41	UG/L	72.2	74.1	2.6	130-70	MSA	20MSP	
Ethyl tert-butyl ether (ETBE)	8260FAB	10.0	10.0	7.60	7.65	UG/L	76.0	76.5	0.66	130-70	MSA	20MSP	
Ethylbenzene	8260FAB	10.0	ND	10.1	9.49	UG/L	101	94.9	6.2	130-70	MSA	20MSP	
Methyl-tert-butyl ether (MTBE)	8260FAB	10.0	10.0	7.22	7.10	UG/L	72.2	71.0	1.7	130-70	MSA	20MSP	
Toluene	8260FAB	10.0	ND	10.7	10.6	UG/L	107	106	0.94	125-76	MSA	20MSP	
Xylenes	8260FAB	30.0	ND	30.4	29.8	UG/L	101	99.3	1.7	130-70	MSA	20MSP	
tert-Amyl methyl ether (TAME)	8260FAB	10.0	10.0	7.42	7.58	UG/L	74.2	75.8	2.1	130-70	MSA	20MSP	
tert-Butyl alcohol (TBA)	8260FAB	50.0	ND	33.2	31.0	UG/L	66.4	62.0	6.9	140-60	MSA	25MSP	
4-Bromofluorobenzene	8260FAB	100.	100.	94.	92.	91.	PERCENT	92.0	91.0	1.1	118-86	SLSA	20SLSP
Dibromofluoromethane	8260FAB	100.	100.	94.	95.	93.	PERCENT	95.0	93.0	2.1	115-86	SLSA	20SLSP
Toluene-d8	8260FAB	100.	100.	97.	97.	97.	PERCENT	97.0	97.0	0.00	110-88	SLSA	20SLSP

**QA/QC Report**  
**Matrix Spike/Duplicate Matrix Spike Summary**

Bace Analytical, Windsor, CA

Lab Report No.: 4731 Date: 01/23/2006

Page: 18

Project Name: Lab Generated or Non COE Sample						
Project No.:	Lab Generated or Non COE Sample					
Field ID:	Lab Generated or Non COE Sample					
Lab Ref ID:	4739-4					
Analyte	Analysis Method	Spike Level MS	Sample Result MS	Spike Result DMS	Units	% Recoveries MS DMS RPD
Gasoline Range Organics (C5-C12)	8260TPH	0.50	ND	0.41	0.43	82.0 86.0 4.8
4-Bromofluorobenzene	8260TPH	100.	94.	91.	PERCENT	91.0 91.0 0.00
						130-70 MSA 20MSP
						91.0 91.0 0.00
						130-70 SLSA 20SLSP

## Chain-of-Custody Form